



Compliance Coordinator Nevada Division of Environmental Protection Bureau of Water Pollution Control 901 South Stewart Street, Suite 4001 Carson City, Nevada 89701-5249

NPDES PERMIT #NV0024228 - DISCHARGE MONITORING REPORTS 4TH QUARTER 2018 WEIR CONSTRUCTION DEWATERING TREATMENT NEVADA ENVIRONMENTAL RESPONSE TRUST, HENDERSON, NEVADA

Dear Compliance Coordinator:

As required by the Finding and Order issued on April 12, 2016 by the Nevada Division of Environmental Protection (NDEP), Bureau of Industrial Site Cleanup (BISC), the Nevada Environmental Response Trust (NERT or the Trust) maintains NPDES Permit #NV0024228 for discharge of perchlorate-treated water near the Las Vegas Wash (LVW) that is extracted during dewatering activities associated with construction of two weirs (the Sunrise Mountain Weir and the Historic Lateral Weir) by the Southern Nevada Water Authority (SNWA) in the Henderson, Nevada area.

The NDEP, Bureau of Water Pollution Control (BWPC) issued NPDES Permit #NV0024228 on August 11, 2017 and the permit became effective on August 14, 2017. The attached items reflect information associated with the permit's October, November, and December 2018 Discharge Monitoring Reports (DMRs). Ramboll US Corporation (Ramboll), on behalf of the Trust, has submitted the DMRs via the United States Environmental Protection Agency (USEPA) NetDMR system per the Subscriber Agreement signed on September 25, 2017.

The weir dewatering treatment plant began operating on January 2, 2018. The treatment plant began receiving water from the Historic Lateral Weir construction site via the Historic Lateral Pump Station (HLPS) on January 2, 2018. The treatment plant began receiving water from the Sunrise Mountain Weir construction site via the Sunrise Mountain Pump Station (SMPS) on January 8, 2018. The HLPS stopped receiving water from the Historic Lateral Weir construction site following the completion of dewatering activities on June 6, 2018, and the SMPS stopped receiving water from the Sunrise Mountain Weir construction site following the completion of dewatering activities on August 14, 2018.

SNWA gave formal notice to the Trust on August 24, 2018, that they will no longer send construction nuisance water to the weir dewatering treatment plant. The start of decommissioning the plant began shortly thereafter.

January 28, 2019

Ramboll 2200 Powell Street Suite 700 Emeryville, CA 94608 USA

T +1 510 655 7400 F +1 510 655 9517 www.ramboll.com



Potable water from the City of Henderson was used between August and December 2018 to flush out the equipment and pipelines associated with the pump stations and treatment plant. Since August 14, 2018, only periodic influent and effluent flows have occurred as a result of decommissioning operations, and NPDES-required samples were collected on those days, as applicable. Due to limited flows on those days, 6-part composite samples over 24-hours were not collected, but representative flow-based grab samples were collected and composited to represent the volume of water at each applicable permitted sample location. On most days since August 14, 2018, flow has been recirculated within the plant in a closed loop system to keep equipment in working order and no NPDES samples were collected. Due to the lack of backwash waste water during plant decommissioning, samples were no longer collected from sample location 002 after August 14, 2018. The final discharge from the plant and final samples collected under this NPDES permit occurred on December 28, 2018. The generators were removed from the plant on January 4, 2019. It is anticipated that the plant will be fully decommissioned by 2nd Quarter of 2019 and this NPDES permit will be terminated.

During the reporting period, the ion exchange (IX) perchlorate treatment processes demonstrated compliance with the daily maximum perchlorate concentration limitation of 18 micrograms per liter $(\mu g/L)$.

Included with this correspondence as Attachment 1 are summaries of analytical and/or flow data for Sample Locations 001 (influent), 003 (effluent), and 004 (the end of mixing zone ambient wash water quality monitoring point) that support the 4th Quarter 2018 DMRs. The associated analytical reports are supplied in electronic format on a CD included in Attachment 2.

No reportable events occurred during 4th Quarter 2018.

In addition, as required by permit condition A.3.1.1.1, included with this 4th quarter report are the annual analytical graphs for the sample locations (Influent [001], Backwash Waste Pump [002], Effluent [003], and the end of the mixing zone ambient wash water quality monitoring point within Las Vegas Wash [004]). Annual analytical graphs are included as Attachment 3. There were no exceedances of effluent limitations for any constituent in 2018.

Should you have any questions concerning this report, please contact Kimberly Kuwabara at (510) 420-2525 or kkuwabara@ramboll.com.

Yours Sincerely,

Kimberly Kuwabara, MS

Senior Managing Consultant CEM #2353, expires 3/20/19

Kubely Kuwabara

Attachments

Attachment 1: Summary of Supporting Analytical and Flow Data

Attachment 2: Supporting Analytical Reports (on CD)

Attachment 3: Annual Analytical Graphs

NPDES Permit #NV0024228 Report – 4th Quarter 2018



ec: James Dotchin, Bureau of Industrial Site Cleanup, NDEP
Weiquan Dong, Bureau of Industrial Site Cleanup, NDEP
Nikita Lingenfelter, Bureau of Water Pollution Control, NDEP
Patrick Mohn, Bureau of Water Pollution Control, NDEP
Alison Fong, U.S. Environmental Protection Agency
Nevada Environmental Response Trust
Tanya O'Neill, Foley and Lardner LLP
John Pekala, Ramboll
Dan Pastor, Tetra Tech, Inc.



NPDES Permit NV0024228 – 4th Quarter 2018 DMRs CEM Certification

Responsible Certified Environmental Manager (CEM) for this project

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.

Kimberly Kuwapara, MS Senior Managing Consultant

Certified Environmental Manager Ramboll US Corporation

CEM Number: 2353

CEM Expiration Date: March 20, 2019

ATTACHMENT 1
SUMMARY OF SUPPORTING ANALYTICAL AND FLOW DATA

Date	Sample Location 001 - Influent Flow Rate (gallons/min)	Sample Location 002 - Backwash to Remix Flow, total (gallons/day)	Sample Location 003 - Effluent Flow, total (gallons/day)	
	October 2018	Flow Data		
10/1/2018 ¹	4	0	0	
10/2/2018*	0	0	0	
10/3/2018 ¹	4	0	0	
10/4/2018*	0	0	0	
10/5/2018 ¹	1	0	0	
10/6/2018*	0	0	0	
10/7/2018*	0	0	0	
10/8/2018 ¹	1	0	0	
10/9/2018*	0	0	0	
10/10/2018*	0	0	0	
10/11/2018*	0	0	0	
10/12/2018*	0	0	0	
10/13/2018	0	0	0	
10/14/2018	0	0	0	
10/15/2018*	0	0	0	
10/16/2018*	0	0	0	
10/17/2018*	0	0	0	
10/18/2018	0	0	0	
10/19/2018	0	0	0	
10/20/2018	0	0	0	
10/21/2018	0	0	0	
10/22/2018*	0	0	0	
10/23/2018*	0	0	0	
10/24/2018*	0	0	0	
10/25/2018*	0	0	0	
10/26/2018*	0	0	0	
10/27/2018	0	0	0	
10/28/2018	0	0	0	
10/29/2018*	0	0	0	
10/30/2018*	0	0	0	
10/31/2018*	0	0	0	
Unit	Maximum gallons/minute:	Total gallons/month:	Total Mgal:	
Permit Limit	≤6,900	M&R	M&R	
Amount	4	-	0	

Date	Sample Location 001 - Influent Flow Rate (gallons/min)	Sample Location 002 - Backwash to Remix Flow, total (gallons/day)	Sample Location 003 - Effluent Flow, total (gallons/day)	
	November 2018	3 Flow Data		
11/1/2018*	0	0	0	
11/2/2018*	0	0	0	
11/3/2018	0	0	0	
11/4/2018	0	0	0	
11/5/2018*	0	0	0	
11/6/2018*	0	0	0	
11/7/2018*	0	0	0	
11/8/2018*	0	0	0	
11/9/2018*	0	0	0	
11/10/2018	0	0	0	
11/11/2018	0	0	0	
11/12/2018*	0	0	0	
11/13/2018*	0	0	0	
11/14/2018*	0	0	0	
11/15/2018*	0	0	0	
11/16/2018*	0	0	0	
11/17/2018	0	0	0	
11/18/2018	0	0	0	
11/19/2018*	0	0	0	
11/20/2018*	0	0	0	
11/21/2018*	0	0	0	
11/22/2018*	0	0	0	
11/23/2018*	0	0	0	
11/24/2018	0	0	0	
11/25/2018	0	0	0	
11/26/2018*	0	0	0	
11/27/2018*	0	0	0	
11/28/2018*	0	0	0	
11/29/2018*	0	0	0	
11/30/2018*	0	0	0	
Unit	Maximum gallons/minute:	Total gallons/month:	Total Mgal	
Permit Limit	≤6,900	M&R	M&R	
Amount	0	-	0	

Date	Sample Location 001 - Influent Flow Rate (gallons/min)	Sample Location 002 - Backwash to Remix Flow, total (gallons/day)	Sample Location 003 - Effluent Flow, total (gallons/day)	
	December 2018			
12/1/2018	0	0	0	
12/2/2018	0	0	0	
12/3/2018*	0	0	0	
12/4/2018 ²	0	0	38,600	
12/5/2018*	0	0	0	
12/6/2018*	0	0	0	
12/7/2018*	0	0	0	
12/8/2018	0	0	0	
12/9/2018	0	0	0	
12/10/2018*	0	0	0	
12/11/2018 ¹	4	0	0	
12/12/2018 ¹	10	0	0	
12/13/2018 ²	0	0	98,900	
12/14/2018 ¹	3	0	0	
12/15/2018	0	0	0	
12/16/2018	0	0	0	
12/17/2018	0	0	0	
12/18/2018 ^{1,2}	36	0	0	
12/19/2018 ²	0	0	75,100	
12/20/2018	0	0	0	
12/21/2018	0	0	37,300	
12/22/2018	0	0	0	
12/23/2018	0	0	0	
12/24/2018	0	0	0	
12/25/2018	0	0	0	
12/26/2018	0	0	0	
12/27/2018 ¹	11	0	0	
12/28/2018 ²	0	0	12,700	
12/29/2018				
12/30/2018		au au		
12/31/2018		~~		
Unit	Maximum gallons/minute:	Total gallons/month:	Total Mgal:	
Permit Limit	≤6,900	M&R	M&R	
Amount	36	-	0.3	

	Sample Location 001 -	Sample Location 002 -	Sample Location 003 -
Data	Influent	Backwash to Remix	Effluent
Date	Flow Rate	Flow, total	Flow, total
	(gallons/min)	(gallons/day)	(gallons/day)

Notes

M&R = monitor and report Mgal = million gallons

General Note: The weir dewatering treatment plant stopped receiving influent water from weir construction activities on August 14, 2018. Plant decommissioning started soon thereafter. Potable water from the City of Henderson is being used to flush out the equipment and pipelines associated with the pump stations and treatment plant. Since August 14, 2018, only periodic influent and effluent flows have occurred as a result of decommissioning operations, and NPDES-required samples were collected on those days, as applicable. On most days since August 14, 2018, flow has been recirculated within the plant in a closed loop system to keep equipment in working order and no NPDES samples were collected. All activitites at the site which required flushing/discharge of water were completed by 12/28/2018 and no further discharges are anticipated.

^{*} No influent flows or effluent discharges occurred. Recirculated flows within the plant in a closed loop system only.

¹ The Weir Water Treatment System is being decommissioned. Water is used only sporadically to flush the system. No effluent discharges occurred. The volume of water pumped into the plant by truck was estimated using the truck tank capacity, and the water was stored and recirculated within the plant in a closed loop system only.

² The Weir Water Treatment System is being decommissioned. Water used only sporadically to flush the system does not support 6-part, 24-hour composite sampling. Representative flow-based grab samples were collected and composited to represent the volume of water at each permitted sample location with flow.

NPDES Permit NV0024228 - 4th Quarter 2018 - Influent (Sample Location 001) Analytical Summary

	Sample						
Sample Date	Location	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>SQL</u>	SQL Units	<u>Method</u>
12/4/2018	001	Ammonia (as N)	< 0.100	mg/l	0.100	mg/l	SM4500-NH3
12/4/2018	001	Dissolved Solids (total)	2240	mg/l	10.0	mg/l	SM2540C
12/4/2018	001	Field pH	8.3	SU		SU	FIELD SAMPLING
12/4/2018	001	Nitrate as N	5.39	mg/l	0.110	mg/l	E300
12/4/2018	001	Nitrate as NO3	23.9	mg/l	0.500	mg/l	E300
12/4/2018	001	Nitrate Nitrite as N	5.39	mg/l	0.110	mg/l	NO2NO3_Calc
12/4/2018	001	Nitrite as N	<0.0500	mg/l	0.0500	mg/l	E300
12/4/2018	001	Nitrogen, Total	5.39	mg/l	0.110	mg/l	NTOTAL
12/4/2018	001	Perchlorate	41.6	ug/l	0.950	ug/l	E314.0
12/4/2018	001	Phosphorus (total)	0.0370 J	mg/l	0.0250	mg/l	E365.3
12/4/2018	001	Suspended solids (total)	19.9	mg/l	0.526	mg/l	SM2540D
12/4/2018	001	Total Kjeldahl Nitrogen	< 0.100	mg/l	0.100	mg/l	E351.2
12/18/2018	001	Dissolved Solids (total)	677	mg/l	5.00	mg/l	SM2540C
12/18/2018	001	Suspended solids (total)	15.8	mg/l	0.526	mg/l	SM2540D
12/18/2018	001	Perchlorate	<0.950	ug/l	0.950	ug/l	E314.0

Notes:

ug/l = micrograms per liter mg/l = milligrams per liter

SU = standard units

- J = Result is less than the reporting limit but greater than or equal to the MDL and the concentration is an approximate value.
- pH monitoring results were not available for the municipal water pumped through the plant on 12/18 and discharged on 12/19.
- The weir dewatering treatment plant stopped receiving influent water from weir construction activities on August 14, 2018. Plant decommissioning started soon thereafter. Potable water from the City of Henderson is being used to flush out the equipment and pipelines associated with the pump stations and treatment plant. Since August 14, 2018, only periodic influent and effluent flows have occurred as a result of decommissioning operations, and NPDES-required samples were collected on those days, as applicable. Due to limited flows on those days, 6-part composite samples over 24-hours were not collected, but representative flow-based grab samples were collected and composited to represent the volume of water at each applicable permitted sample location. On most days since August 14, 2018, flow has been recirculated within the plant in a closed loop system to keep equipment in working order and no NPDES samples were collected. All activitites at the site which required flushing/discharge of water were completed by 12/28/2018 and no further discharges are anticipated.

NPDES Permit NV0024228 - 4th Quarter 2018 - Effluent (Sample Location 003) Analytical Summary

Sample Date	Sample Location	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>SQL</u>	SQL Units	Method
12/4/2018	003	Ammonia (as N)	< 0.100	mg/l	0.100	mg/l	SM4500-NH3
12/19/2018	003	Ammonia (as N)	< 0.100	mg/l	0.100	mg/l	SM4500-NH3
12/4/2018	003	Boron	0.959	mg/l	0.0250	mg/l	E200.7
12/19/2018	003	Boron	0.934	mg/l	0.0250	mg/l	E200.7
12/4/2018	003	Dissolved Solids (total)	2120	mg/l	10.0	mg/l	SM2540C
12/19/2018	003	Dissolved Solids (total)	2160	mg/l	10.0	mg/l	SM2540C
12/28/2018	003	Dissolved Solids (total)	596	mg/l	5.00	mg/l	SM2540C
12/4/2018	003	Field pH	7.9	SU		SU	FIELD SAMPLING
12/4/2018	003	Manganese	< 0.0150	mg/l	0.0150	mg/l	E200.7
12/19/2018	003	Manganese	0.0198 J	mg/l	0.0150	mg/l	E200.7
12/4/2018	003	Nitrate as N	4.86	mg/l	0.110	mg/l	E300
12/19/2018	003	Nitrate as N	4.93 H	mg/l	0.0550	mg/l	E300
12/4/2018	003	Nitrate as NO3	21.5	mg/l	0.500	mg/l	E300
12/4/2018	003	Nitrate Nitrite as N	4.86	mg/l	0.110	mg/l	NO2NO3_Calc
12/19/2018	003	Nitrate Nitrite as N	4.93 H	mg/l	0.0550	mg/l	NO2NO3_Calc
12/4/2018	003	Nitrite as N	< 0.0500	mg/l	0.0500	mg/l	E300
12/19/2018	003	Nitrite as N	<0.0250 H	mg/l	0.0250	mg/l	E300
12/4/2018	003	Perchlorate	<0.950	ug/l	0.950	ug/l	E314.0
12/13/2018	003	Perchlorate	<0.950	ug/l	0.950	ug/l	E314.0
12/19/2018	003	Perchlorate	<0.950	ug/l	0.950	ug/l	E314.0
12/28/2018	003	Perchlorate	<0.950	ug/l	0.950	ug/l	E314.0
12/4/2018	003	Phosphorus (total)	0.0383 J	mg/l	0.0250	mg/l	E365.3
12/19/2018	003	Phosphorus (total)	0.0460 J	mg/l	0.0250	mg/l	E365.3
12/4/2018	003	Suspended solids (total)	6.11	mg/l	0.526	mg/l	SM2540D
12/13/2018	003	Suspended solids (total)	10.5	mg/l	0.500	mg/l	SM2540D
12/19/2018	003	Suspended solids (total)	18.8	mg/l	0.833	mg/l	SM2540D
12/28/2018	003	Suspended solids (total)	2.11	mg/l	0.526	mg/l	SM2540D
12/4/2018	003	Total Inorganic Nitrogen-Calc	4.86	mg/l	0.500	mg/l	NTOTAL
12/19/2018	003	Total Inorganic Nitrogen-Calc	4.93	mg/l	0.500	mg/l	NTOTAL

Notes:

mg/l = milligrams per liter

ug/l = micrograms per liter

SU = standard units

H = Sample was prepped or analyzed beyond the specified holding time.

- J = Result is less than the reporting limit but greater than or equal to the MDL and the concentration is an approximate value.
- pH monitoring results were not available for the municipal water pumped through the plant on 12/18 and discharged on 12/19.
- The weir dewatering treatment plant stopped receiving influent water from weir construction activities on August 14, 2018. Plant decommissioning started soon thereafter. Potable water from the City of Henderson is being used to flush out the equipment and pipelines associated with the pump stations and treatment plant. Since August 14, 2018, only periodic influent and effluent flows have occurred as a result of decommissioning operations, and NPDES-required samples were collected on those days, as applicable. Due to limited flows on those days, 6-part composite samples over 24-hours were not collected, but representative flow-based grab samples were collected and composited to represent the volume of water at each applicable permitted sample location. On most days since August 14, 2018, flow has been recirculated within the plant in a closed loop system to keep equipment in working order and no NPDES samples were collected. All activitites at the site which required flushing/discharge of water were completed by 12/28/2018 and no further discharges are anticipated.

NPDES Permit NV0024228 - 4th Quarter 2018 - End of Mixing Zone Ambient Wash Water Quality Monitoring Point (Sample Location 004) Analytical Summary

	<u>Sample</u>						
Sample Date	Location	<u> Analyte</u>	Result	<u>Units</u>	<u>SQL</u>	SQL Units	<u>Method</u>
12/4/2018	004	Manganese	0.0215	mg/l	0.0150	mg/l	E200.7
12/4/2018	004	Dissolved Solids (total)	1390	mg/l	5.00	mg/l	SM2540C
12/4/2018	004	Boron	0.511	mg/l	0.0250	mg/l	E200.7

Notes:

mg/l = milligrams per liter

The weir dewatering treatment plant stopped receiving influent water from weir construction activities on August 14, 2018. Plant decommissioning started soon thereafter. Potable water from the City of Henderson is being used to flush out the equipment and pipelines associated with the pump stations and treatment plant. Since August 14, 2018, only periodic influent and effluent flows have occurred as a result of decommissioning operations, and NPDES-required samples were collected on those days, as applicable. On most days since August 14, 2018, flow has been recirculated within the plant in a closed loop system to keep equipment in working order and no NPDES samples were collected. All activitites at the site which required flushing/discharge of water were completed by 12/28/2018 and no further discharges are anticipated.

RAMBOLL

ATTACHMENT 2 SUPPORTING ANALYTICAL REPORTS (ON CD)





NPDES PERMIT #NV0024228, 4Q 2018, ATTACHMÊN 2 - SUPPORTING ANALYTICAL REPORTS

NEVADA ENVIRONMENTAL RESPONSE TRUST

1690011199-001

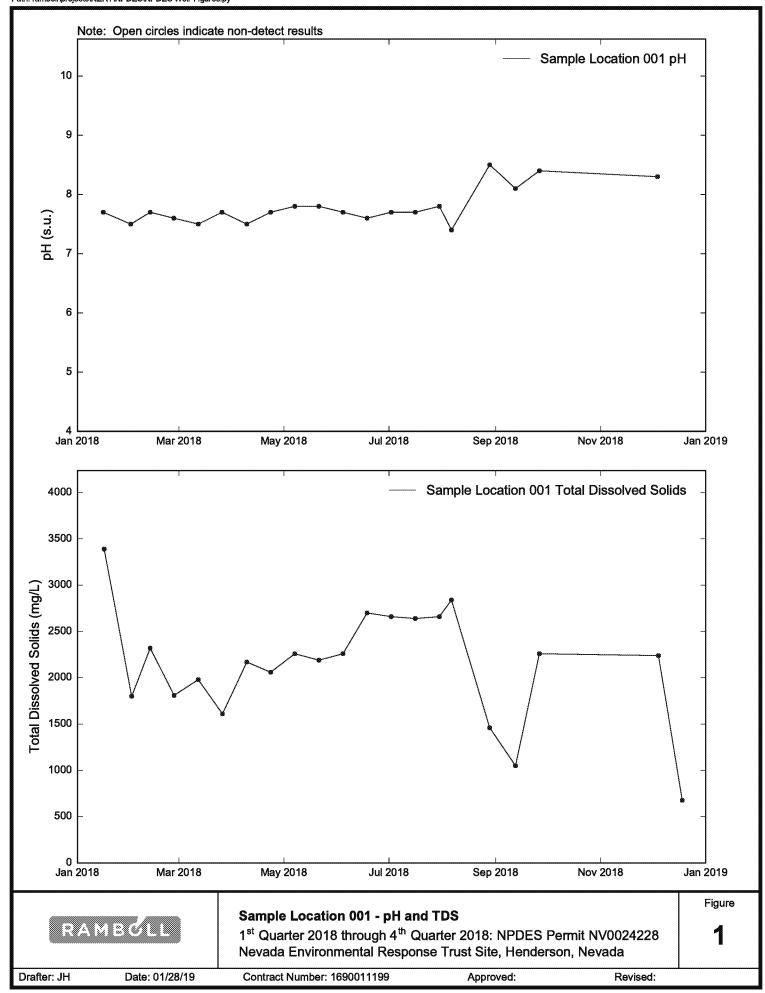
I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein, exceptions and corresponding justifications are provided in the tables.

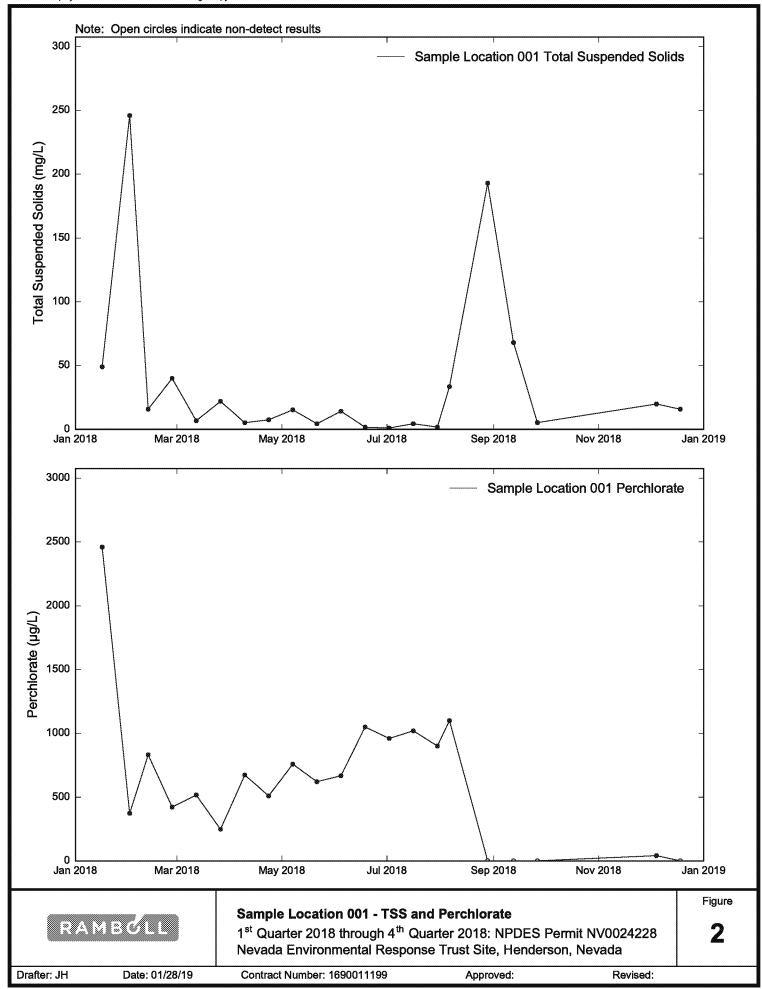
Kimberly Kuv(abaha

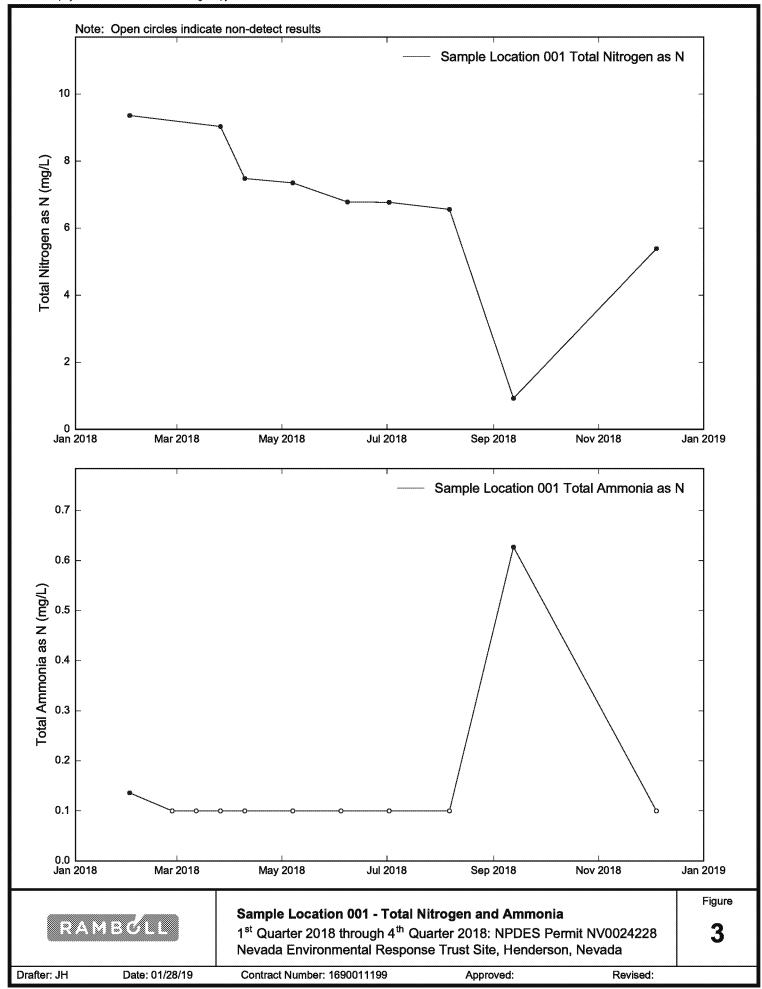
CEM #2353, expires 3/20/19

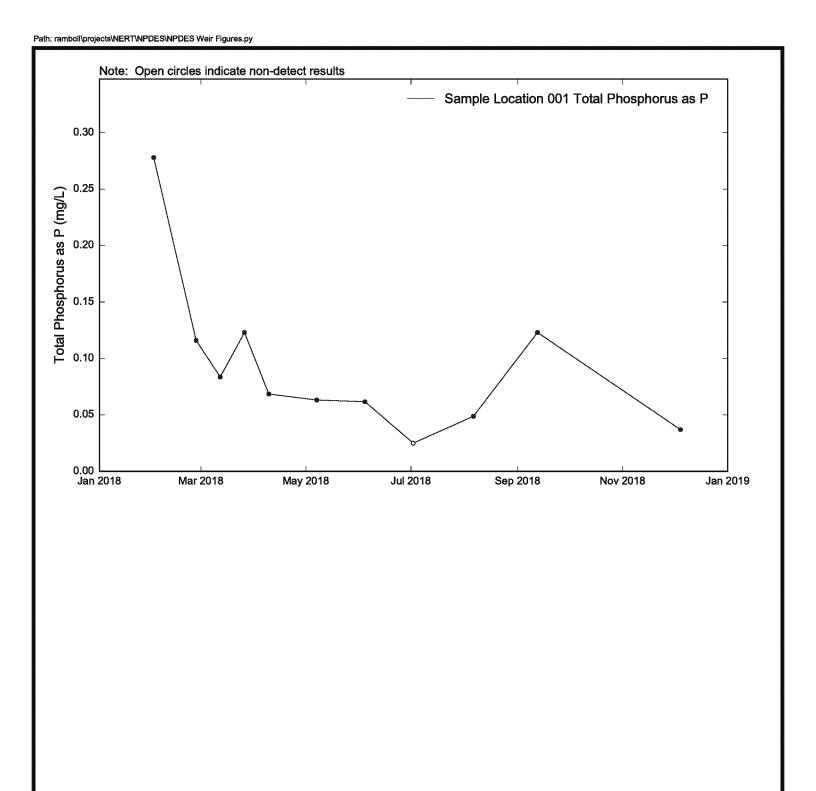
20/20/2016

ATTACHMENT 3 ANNUAL ANALYTICAL GRAPHS







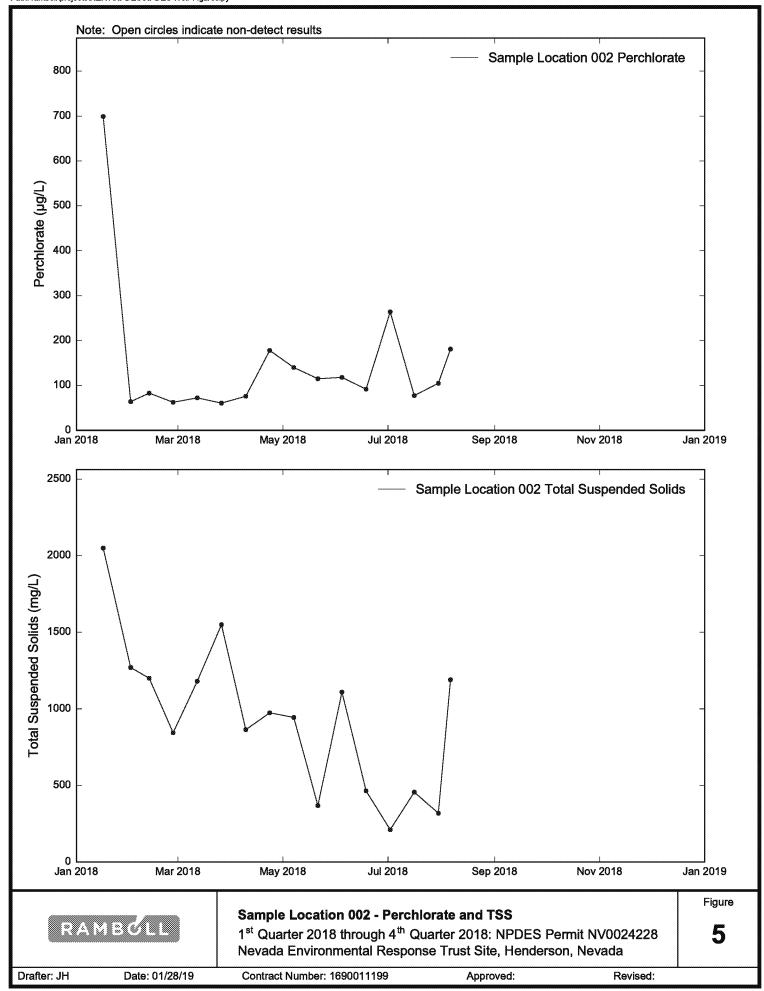


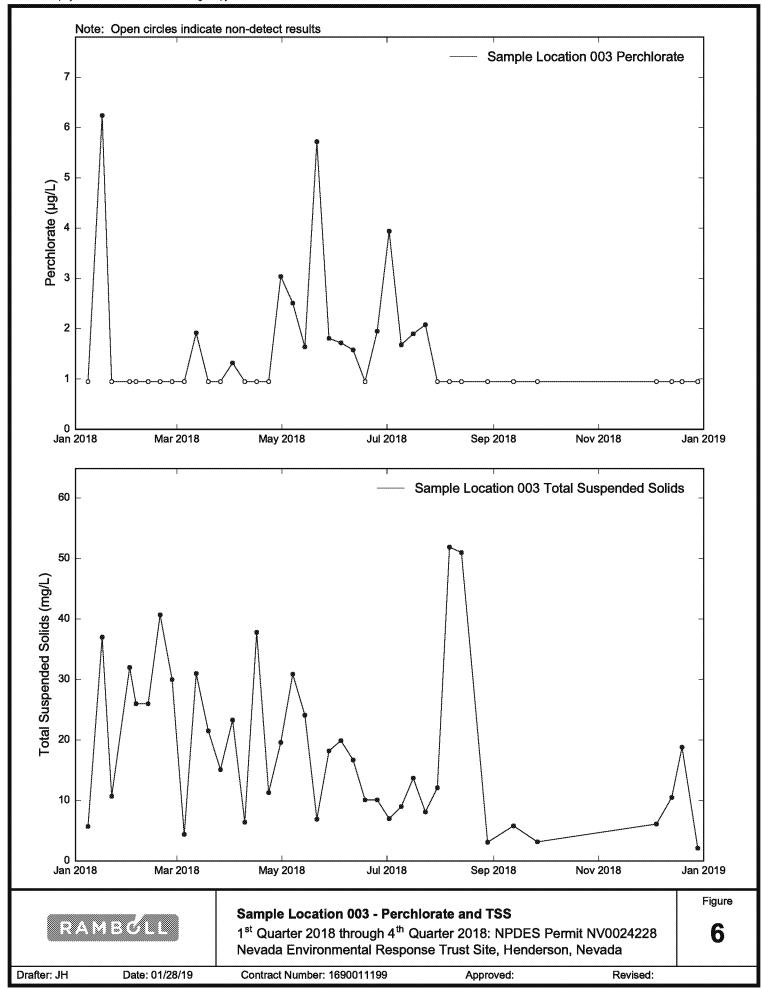


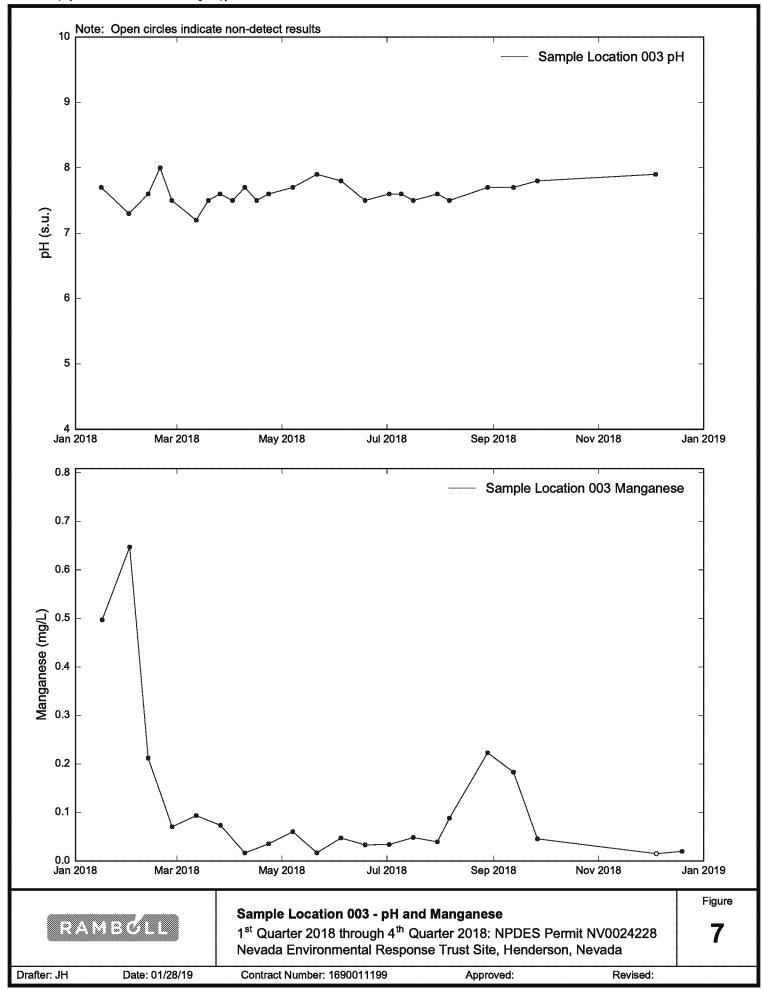
Sample Location 001 - Total Phosphorus

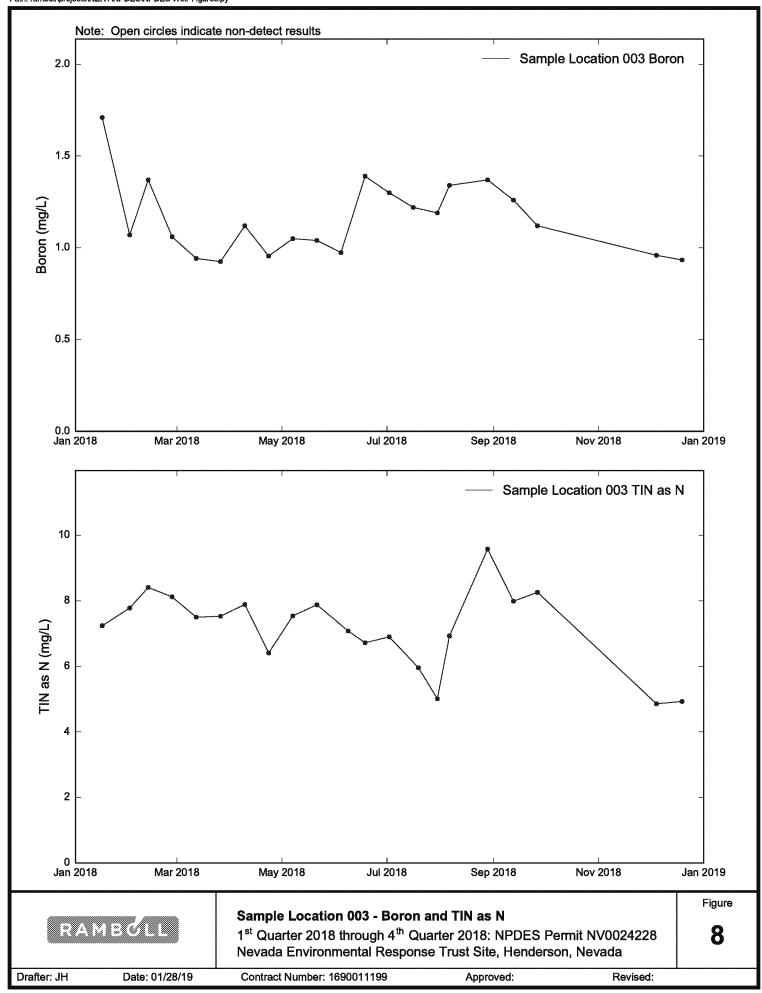
1st Quarter 2018 through 4th Quarter 2018: NPDES Permit NV0024228 Nevada Environmental Response Trust Site, Henderson, Nevada Figure

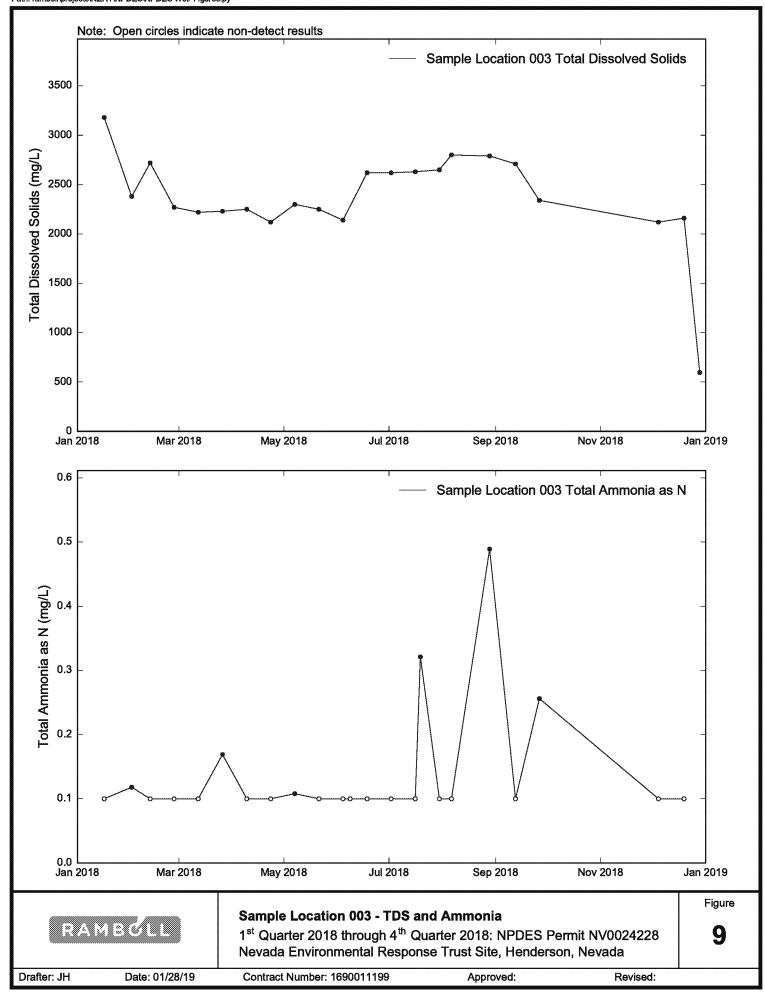
Drafter: JH Date: 01/28/19 Contract Number: 1690011199 Approved: Revised:

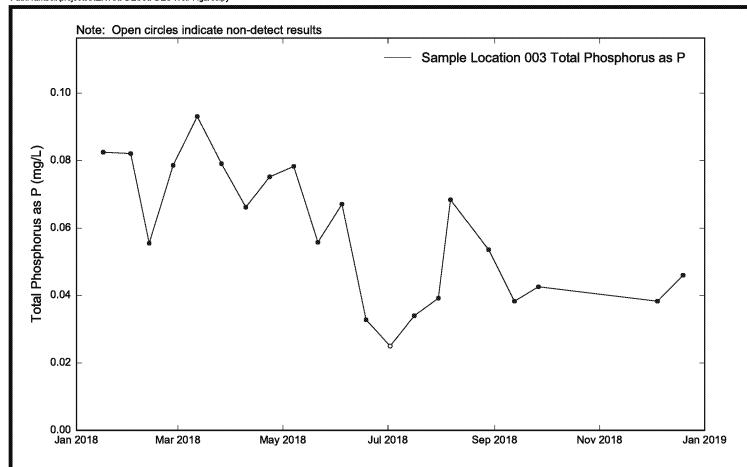














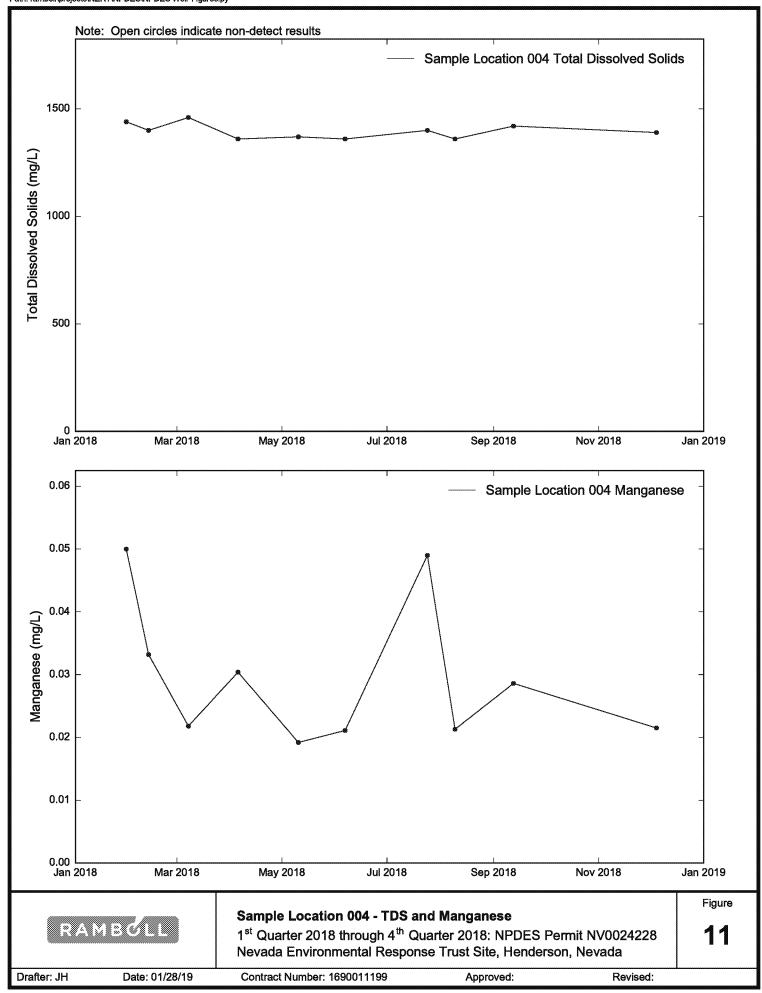
Sample Location 003 - Total Phosphorus

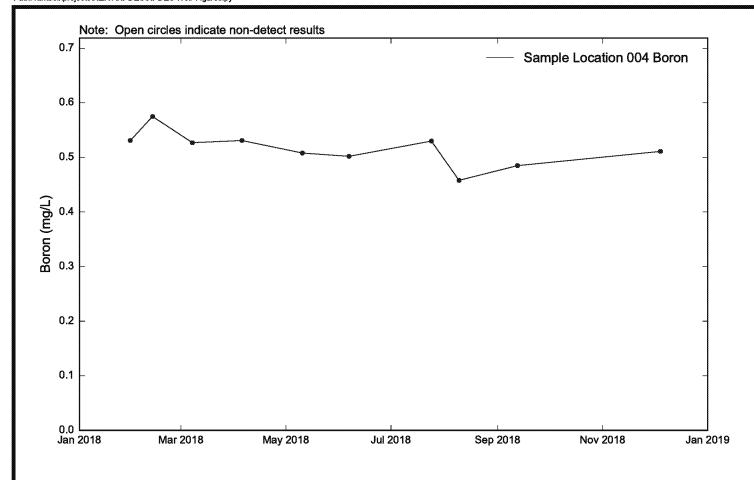
1st Quarter 2018 through 4th Quarter 2018: NPDES Permit NV0024228 Nevada Environmental Response Trust Site, Henderson, Nevada

Figure

10

Drafter: JH Date: 01/28/19 Contract Number: 1690011199 Approved: Revised:





PANEZ II.

Sample Location 004 - Boron

1st Quarter 2018 through 4th Quarter 2018: NPDES Permit NV0024228 Nevada Environmental Response Trust Site, Henderson, Nevada 12

Figure

Drafter: JH Date: 01/28/19 Contract Number: 1690011199 Approved: Revised: